

# Research, Informatics and Graduate Studies

<https://sites.gtiit.edu.cn/research/positions/rf-2018004/>

## Research Fellow Positions in Fish Microbiology or Disease Resistance in Fish-group of Prof. Ka Yin Leung (RF-2018004)

### Description

The Biotechnology and Food Engineering Program (group of **Prof. Ka Yin Leung**) is looking for two scientists to lead experimental research projects in the studies of fish bacterial disease or disease resistance in fish host. Contract duration: 3 years.

### Project Details

**Position 1:** Our lab is interested in the studies of bacterial type III and type VI secretion systems (T3SS and T6SS) in *Edwardsiella* species. These are the major virulence mechanisms that are responsible for the transport of 'killer toxins' or effectors into the host cells or bacteria in the surrounding. We plan to use bioinformatics and genomics approaches to identify and characterize novel T3SS and T6SS effectors.

**Position 2:** We plan to study the mechanism(s) of disease development and disease resistance in fish. Knowledge generated will be applied to strength the fish immunity. Next generation sequencing, bioinformatics, and environmental microbiology will be some of the required tools and experience for this study.

My lab is recognized as a global leader in *Edwardsiella* biology and the studies of T3SS and T6SS in fish pathogens. You will be working in modern facilities with the state of the art equipment for tissue culturing, molecular microbiology, genomics studies, bioinformatics, and host-pathogen interactions. You will work in a conducive environment and interact with our overseas and local collaborators.

### Keywords

*Edwardsiella* species, type III and type VI secretion systems, effector characterization, host-pathogen interaction, bioinformatics and genomics studies, machine learning, next generation sequencing, construction of deletion mutants and transposon library, molecular microbiology, fish vaccines, disease resistance in host, studies of microaerophiles, facultative anaerobes, and anaerobes, fish disease, fish models for infection studies.

### Selection Criteria

- PhD degree in Molecular Microbiology, Bacterial Pathogenesis, or Environmental Microbiology Studies (essential)
- Strong background in one or more of the following areas: molecular microbiology, using fish as a host model, bacterial pathogenesis, tissue culturing, use of fluorescent microscope, construction of deletion mutants and transposon library, and transcriptome and secretome analysis (preferable for Position 1)
- Strong interest in effector studies, bioinformatics and genomics, next generation sequencing and analysis (essential for Position 1)
- Strong background in one or more of the following areas: molecular microbiology, using fish as a host model, disease resistance in fish, next generation sequencing and analysis, and working with anaerobes (preferable for Position 2)
- Strong interest in environmental microbiology and disease resistance in fish, and

### Program

Biotechnology and Food Engineering

### Research Area

Fish Microbiology, Disease Resistance

### Contacts

Prof. Ka Yin Leung

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[Webpage Link](#)

### Application Deadline

31 December 2024

### Date Posted

March 8, 2018

have great computational skills (essential for Position 2)

- Strong interest to work temporarily in overseas labs (essential)
- Good communication skills, good command of English: reading, writing and talking (essential)
- Ability to work independently as well as in a team environment (essential)
- Ability to author scientific reports and scientific publications (essential)

### **Benefits**

- Salary range: up to \$49,000 / year (depending on qualifications of the candidate)
- Subsidized housing at GTIIT, China
- Health insurance: regular cover for Chinese citizens or private health insurance for foreigners
- Professional conference travel allowance

### **Application**

- Application deadline: **31 December 2024**
- Send below required documents electronically to: [kayin.leung@gtiit.edu.cn](mailto:kayin.leung@gtiit.edu.cn)
  1. Curriculum vitae and personal statements
  2. A publication list
  3. Three letters of recommendation (one from the mentor for PhD and/or Master's studies)
  4. A short research plan outline (up to one page in length)
  5. Degree certificates with certified English translation for both the PhD and Master's degrees